

IMPROVING THE CAPACITY OF HOUSEWIVES WITH THE EDUCATIONAL MEDIA “CINTA” (CREATE THE BEST NUTRITION FOR FAMILIES) : EFFORTS TO PREVENT TYPE 2 DIABETES IN CHILDREN IN MERUYA SELATAN SUBDISTRICT, WEST JAKARTA

Novena ULITA^{1*}, Mira Zulia SURIASTUTI², Engga Probi ENDRI³

^{1,2,3} Universitas Mercu Buana, Jakarta, INDONESIA

****novena.ulita@mercubuana.ac.id***

ABSTRACT

The high rate of type 2 diabetes in children in Indonesia is a serious concern because it is closely related to low nutritional literacy at the family level. The proliferation of digital technology has triggered intense business competition, encouraging various products to compete with attractive promotional designs. This poses a major challenge for mothers in preventing their families from experiencing FOMO (Focus on Food Insecurity) related to the consumption of viral sweet drinks that are easily accessible to children. Therefore, housewives, as the primary managers of family consumption, often lack sufficient knowledge about balanced nutrition, how to read nutrition labels, and children's daily sugar intake limits. To address this issue, a team of lecturers and students from the Visual Communication Design (DKV) Study Program at Mercu Buana University conducted a community service activity aimed at increasing housewives' understanding of the importance of healthy and balanced nutrition through strengthening local food. The implementation team used a user-oriented, design-based participatory approach. The activity targeted housewives in the Meruya Selatan sub-district of West Jakarta. This activity was carried out in five main stages: empathy mapping, training, designing educational visual media, evaluation, and program sustainability. The team used educational media in the form of three illustrated posters with the theme "CINTA" (Create the Best Nutrition for Families). Evaluation results showed an increase of 95% of participants intending to read labels more regularly, and 85% wanting to deepen their knowledge about balanced nutrition and local foods. As a follow-up outcome, the team established a WhatsApp group "CINTA Mothers' Education Room" to support ongoing communication and education among participants through digital channels, media publications, and IPR.

Keywords: Nutrition Education, Visual Communication Design, Housewives, Childhood Diabetes, Community Empowerment.

1. INTRODUCTION

Family nutrition issues in urban areas are complex, encompassing social, economic, cultural, and educational dimensions. The WHO (2022) stated that diabetes mellitus is a leading cause of death that can be prevented through nutrition education and early lifestyle changes. This situation is increasingly concerning considering that the prevalence of diabetes in DKI Jakarta has reached 3.1%, the highest in Indonesia, with cases in children increasing drastically since 2010 (Compilation Team, 2023; Admin, 2024).

Meruya Selatan Village, Kembangan District, West Jakarta, with a population of 42,196 across 11 neighborhood units (RW) and 84 neighborhood units (RT) (Kembangan District, 2023), faces serious challenges in meeting the need for healthy food and nutrition education. A Good Stats survey shows that rising prices of basic necessities are a major issue for residents, surpassing unemployment and traffic congestion (Reynaldi, 2024). This condition contradicts the vision of "Jakarta as an Advanced Global City by 2045," which emphasizes the development of superior human resources (Jakarta Communication and Information Agency, 2025) and President Prabowo Subianto's national program that prioritizes fulfilling community nutrition through a free meal program (Sugiarto, 2025).

A preliminary survey of 42 housewives aged 26-35 in South Meruya with monthly food expenditures of Rp1,000,000-Rp3,000,000 identified four main challenges: high food prices, lack of information on balanced nutrition, difficulty providing nutritious food, and minimal nutrition education in the community. Housewives play a central role in selecting, preparing, and serving food, significantly impacting the family's nutritional status, but face constraints such as limited time, limited information, and the perception that healthy food is expensive (Setiawan, 2020).

Community-based education has been proven effective in shaping sustainable family nutritional behavior changes (Arumsari, 2019; Syah et al., 2024), especially when supported by appropriate, nutritious local foods (National Nutrition Agency, 2022). Visual media plays a crucial role in conveying easily understood nutritional information, especially when tailored to target characteristics such as age, education, and media consumption habits (Syah et al.,

2024). Attractive design, appropriate color selection, and appropriate typography can make visual media significantly appealing to its audience (Maylano et al., 2025).

Design thinking and empathy mapping approaches are relevant for deeply understanding the needs and barriers of target audiences (Brown, 2009; IDEO.org, 2015). Digital platforms like WhatsApp are effective as flexible and participatory educational spaces, enabling the delivery of sustainable and interactive nutrition materials (Wardhani et al., 2023). Typical challenges of urban life, such as limited time and exposure to unhealthy food advertisements, make conventional educational approaches less effective, so visual and digital media are considered more relevant for today's housewives.

Against this backdrop, targeted and sustainable educational interventions are needed through the establishment of digital learning spaces, such as the WhatsApp group "Ruang Edukasi Para Ibu CINTA" (Love Mothers' Education Room), which aims to improve mothers' understanding of balanced nutrition and their ability to read nutrition labels. Through a community-based visual and digital approach, nutrition interventions become more targeted and contribute to the prevention of non-communicable diseases, including type 2 diabetes in children. This program is expected to be a concrete step towards achieving Indonesia's golden generation by 2045 (Winarni et al., 2023).

2. METHOD

The method used in this Community Service activity is a participatory approach based on user-centered design. The implementation team developed a series of activities to address the main problems faced by partners, namely the low understanding of housewives regarding balanced nutrition and the high risk of type 2 diabetes in children due to the consumption of high-sugar foods. The target of this activity is housewives in the Meruya Selatan Subdistrict, West Jakarta, who have been identified as a vulnerable group through an initial survey. The activity was carried out for five months through five core stages: empathy mapping and initial education, training and workshops, technology implementation, mentoring and evaluation, and program sustainability through the formation of an educational WhatsApp group, with the following details:

Tabel 1. Stages of Implementation of the Author's Community Service Activities

Stages	Description
Stage 1: Problem Empathy Map and Program Education Implementation Method: Lecture and Group Discussion	<p>The empathy map was conducted to identify potential and challenges experienced by partners. In addition, during this phase, outreach activities regarding the "CINTA" (Create the Best Nutrition for Families) program will be conducted for four months within the community of RT 003 RW 007, Meruya Selatan Village. The outreach activities will include the following:</p> <ol style="list-style-type: none"> 1. Creating a promotional poster for the program, which will be distributed through a WhatsApp group announcing the program's launch. 2. Coordinating with the Family Welfare Movement (PKK) in Meruya Selatan Village to establish a family education platform through a WhatsApp group. 3. Collecting information related to nutrition education from both the National Nutrition Agency and the Ministry of Health's website as reference sources for nutrition education
Stage 2: Capacity Building Training Implementation Method: Workshops, Simulations, Discussion Groups, and Demonstrations	<p>After gaining insight and knowledge about the importance of balanced nutrition for creating healthy families, specific training will be conducted to increase the capacity of mothers within the community partners. The training will take the form of a workshop on managing family meal composition through a variety of healthy and nutritious menus. The steps will be:</p> <ol style="list-style-type: none"> 1. Workshop on reading nutrition labels on packaged foods and beverages 2. Simulation on reading nutrition labels on the packaging design of each family food product

Stages	Description
Stage 3: Technology Implementation	Demonstration on introducing local foods as menu options for mothers Based on the outreach and capacity building activities for mothers, the "CINTA" (Create the Best Nutrition for Families) illustrative poster was designed as an educational tool to strengthen the material and ensure its sustainability. At this stage, the proposal team will design a technology that will be distributed to community partners so that it can be used as a guide in providing healthy and nutritious food for families.
Implementation Method: Design Thinking	
Stage 4: Mentoring and Evaluation	The next stage is mentoring and evaluation.
Implementation Method: Initial and final assessment tests, group discussions	<ol style="list-style-type: none"> 1. The focus group discussion forum will be attended by PKK (Family Welfare Movement) administrators, who will then serve as mentors for the program's future sustainability through the WhatsApp group: "Rumah Edukasi Para Ibu Penuh CINTA" (Mothers' Education Room Full of Love). 2. The evaluation will use pre- and post-tests using Google Forms for each implementation stage to assess the program's success. Interviews will also be conducted with the mothers regarding their perspectives and understanding of the nutrition education they received.
Stage 5: Program Sustainability and Activity Reports	<p>The final stage is the program's sustainability phase, which aims to ensure that participating mothers can apply the knowledge they have gained and utilize the technology designed to support improved family nutrition. This is the primary goal of the entire program: to empower each family to independently monitor and manage their family's diet to avoid various diseases, particularly reducing the rate of diabetes in children in Jakarta. Thus, it is hoped that the sustainability of this program will serve as a model community that can motivate other families.</p> <p>During this stage, the following activities will be carried out:</p> <ol style="list-style-type: none"> 1. Monitoring through a questionnaire distributed through a WhatsApp group regarding family eating habits once a month. 2. Conducting feedback interviews at the end of the program and providing motivation to other mothers regarding their experiences in following and applying the knowledge taught to program participants. <p>The PKK leaders will then become family nutrition cadres and are expected to continue providing regular education through the established WhatsApp group.</p>
Implementation Method: Monitoring, Discussion, and Testimonials	

Source: Author, 2025

The implementation involved cross-stakeholder collaboration with multiple partners: Meruya Selatan Village Family Welfare Movement (PKK) as local partners, PT Kalbe Farma and PT Parara Bumi Nusantara as industrial partners, and Alifa Foundation and Erlangga Publishers as educational partners. This program operates under the Merdeka Belajar Kampus Merdeka (MBKM) framework and contributes to the university's Key Performance Indicators (IKU) through active student participation.

Each stage undergoes evaluation to assess benchmark achievement through two methods: interviews with mothers to capture changes in knowledge, motivation, and testimonials from activities, and pre-and post-tests conducted before and after each activity. The evaluation process is overseen by a monitoring and evaluation team appointed by the relevant Directorate and the Head of LPPM Mercu Buana University or their representative.

3. RESULTS AND DISCUSSION

The Community Service activity was successfully implemented as planned and demonstrated significant results in improving nutritional literacy and practical skills among housewives in Meruya Selatan Village, West Jakarta. A total of 20 active participants, including PKK administrators and housewives, took part, with support from academics, students, and industry partners. Observations revealed three main challenges faced by the mothers: (1) a low level of understanding regarding the importance of nutrition and balanced diets for their families, (2) limited knowledge about managing diets and food composition, (3) difficulties in providing healthy food options for their families. These challenges served as the foundation for collaboration between lecturers and students to educate the target group, namely mothers in Meruya Selatan Village. The focus was on increasing awareness about local foods, as well as enhancing the mothers' ability to read nutrition labels on food and beverages, particularly concerning added sugar content. The nutrition education through DKV-design illustrated posters is based on information from the Ministry of Health of the Republic of Indonesia's official website, nutrition expert from the National Nutrition Agency (Prof. Dr. Ir. Ikeu Tanziah, MS), and a doctor from PT. Kalbe Farma. Furthermore, posters are a form of graphic art that have their own distinct styles, styles, and trends that are inseparable from a particular era (Iskandar, 2017), making them effective as an educational medium for mothers. The illustrated poster is named "CINTA," an acronym for the movement to create the best nutrition for families. These various sources were then combined into the following three illustrated posters:

1. An educational poster regarding the impact of type 2 diabetes in children. This poster provides mothers with an overview of the signs in their children and encourages them to seek regular check-ups at the nearest community health center or doctor if they notice any symptoms.

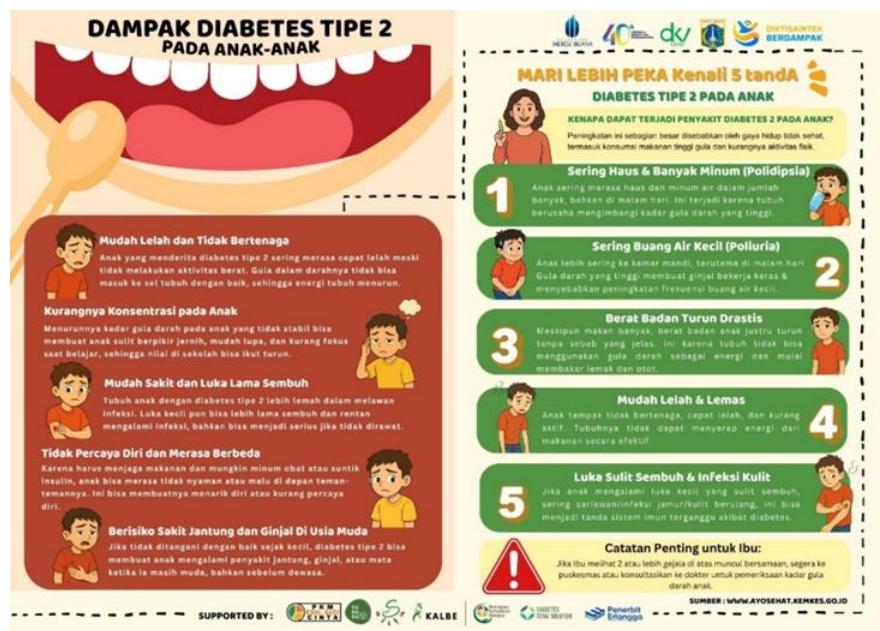


Figure 1. Educational Poster on the Impact of Diabetes and Recognizing the Five Signs of Type 2 Diabetes in Children

Source: Implementation Team, 2025

2. An educational poster about the role of mothers in preventing diabetes, promoting healthy living with balanced nutrition, and introducing local Indonesian foods. This poster provides information about the situations mothers face and the importance of understanding balanced nutrition in preventing type 2 diabetes in children.

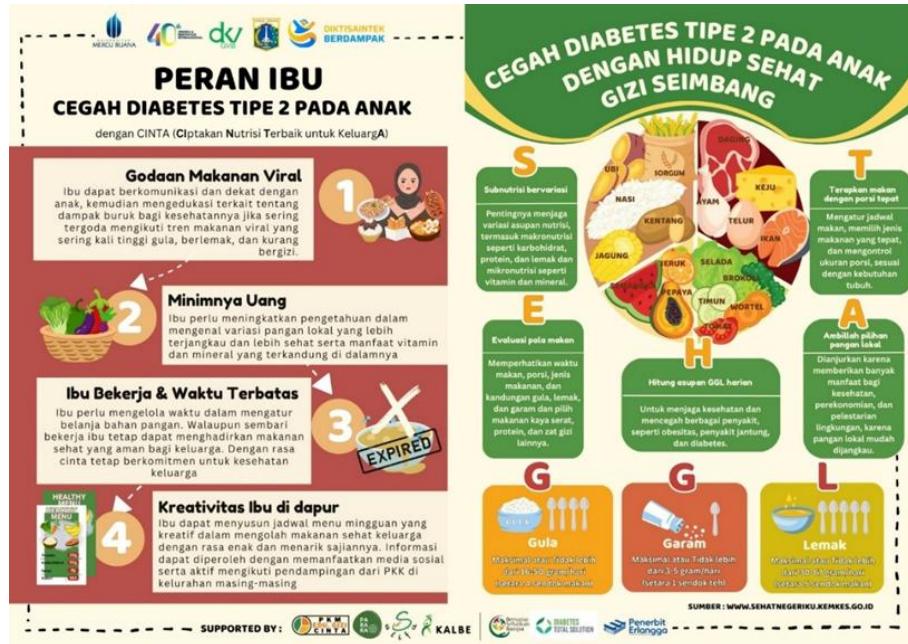


Figure 2. Educational Poster on the Role of Mothers in Preventing Type 2 Diabetes with Balanced Nutrition

Source: Implementation Team, 2025

- This educational poster introduces the limits of added sugar and how to read the added sugar content on the nutrition labels of packaged foods and beverages. This poster educates children about the limits on added sugar intake and encourages them to carefully read nutrition labels for sugar content and serving sizes.

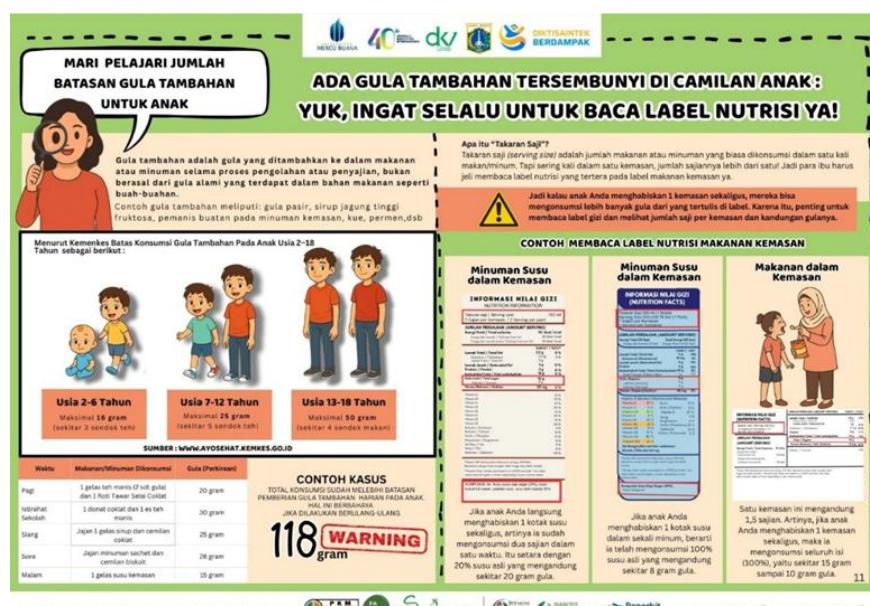


Figure 3. Educational Poster on Reading Added Sugars on Packaging Labels

Source: Implementation Team, 2025

The poster above demonstrates the strategic role of mothers in managing their families' diets by selecting local foods and fostering communication between mothers and their children in determining their food choices. This approach not only provides theoretical knowledge but also provides practical skills in reading nutrition labels on products. After designing the educational media through the illustrated poster above, the next step was to reinforce the information by conducting a design test in collaboration with doctors from PT. Kalbe Farma to convey the information contained within the material.

This activity was evaluated using pre- and post-tests before and after the activity. Here is some data related to the pre-test results:

Table 2. Evaluation of activities before and after the activity

No.	Description	Before the Activity	After Activity
1.	Nutrition Information Sources	55% (Social Media), 25% (Health Workers), 10% (Sub-district PKK), others	Demonstrating social media as a strategic channel
2.	The Habit of Reading Nutrition Labels	50% often, 40% sometimes, 10% rarely	70% understand how to read labels, 30% understand quite well
3.	Focus on Reading Nutrition Labels	70% kadaluarsa, 60% komposisi, 45% gula, 25% lemak/kalori	85% focus on sugar, 10% on expiration date, 1% on ingredient composition
4.	Local Food Knowledge	45% were able to name the type, 80% were sure of the benefits	90% were able to say it correctly
5.	Added Sugar Limits (Children)	75% of the age limit is 2–6 years (16 gr), 10% of the age limit is 13–18 years (50 gr)	100% know for 2–6 years, 35% know for 13–18 years
6.	Understanding Educational Media (Posters)	—	85% very easy to understand, 15% quite easy to understand
7.	Practical Readiness	—	75% very ready, 20% ready, 5% still unsure
8.	Confidently Choose Healthy Food	—	65% very confident, 35% confident
9.	Intention to Read Labels More Regularly	—	95% intend to read more regularly
10.	Interest in Advanced Nutrition Studies	—	85% want to learn more
11.	Program Sustainability	—	A WhatsApp group was formed "CINTA Mothers' Educational Space" as an active forum.

Based on the survey results of the 20 respondents, participants have as family change agents but require approaches tailored to their educational background and age. Social media can strategically disseminate nutritional information among housewives, though it needs proper media literacy to ensure accurate, non-misleading information. A gap exists between mothers' beliefs about local food benefits and their actual local food knowledge. Additionally, mothers' knowledge of added sugar intake remains very low, making ongoing visual education highly relevant for preventing childhood type 2 diabetes

As a form of sustainability, a WhatsApp group was created, "Ruang Edukasi Para Ibu Penuh CINTA" (Educational Space for Mothers Full of Love), which actively serves as a forum for information sharing, discussion, and ongoing monitoring. Facilitated by PKK cadres, the group remains active after the main activity concludes. Respondents stated that the group significantly helps them retain material and continue learning in a supportive environment.

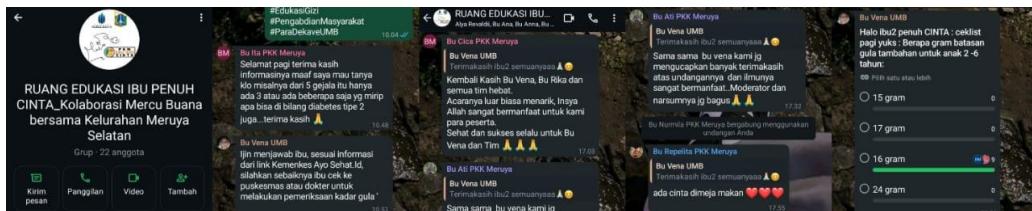


Figure 4. WhatsApp group Ruang Edukasi Para Ibu Penuh CINTA

Comprehensive evaluation showed empathy-based visual education and design thinking significantly improved nutritional literacy, increased knowledge while fostered positive attitudes and motivating mothers to adopt a healthy lifestyle. This intervention model has great replication potential for other urban areas facing similar challenges with appropriate approaches.

4. CONCLUSION

A community service initiative by the Visual Communication Design Study Program at Mercu Buana University showcased how educational visual media can enhance nutritional literacy among housewives. This program addresses the increasing cases of type 2 diabetes in children due to high-sugar diets. Through the "CINTA" (Create the Best Nutrition for Families) poster, participants learned about the signs of diabetes in children, the significance of balanced nutrition and local foods, and how to read nutrition labels. Pre- and post-test evaluations showed an increase in participants' knowledge, awareness, and confidence regarding nutrition. Notably, 95% of participants expressed an intention to read nutrition labels more frequently, and 85% wished to expand their knowledge of nutrition. The program's success was bolstered by collaboration among academics, village governments, and industry partners. To ensure sustainability, the "CINTA Mothers' Education Room" WhatsApp group was established as an effective strategy. This program deserves to be replicated in other regions, contributing to a healthy and nutrition-conscious generation by 2045.

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